Assessment of Member States’ progress in the implementation of Programmes of Measures during the first planning cycle of the Water Framework Directive

Member State Report:

*Ireland (IE)*

Disclaimer: this report was prepared by consultants contracted by the European Commission, and it does not necessarily reflect the views of the Commission.
1. Introduction

The Water Framework Directive (WFD) requires that Member States (MS) establish Programmes of Measures to achieve the objectives established under Article 4. Measures are required to reduce the pressures to levels that are compatible with the achievement of the objectives such as the achievement of good water status by 2015.

Programmes of Measures for the first planning cycle were due to be published in December 2009 and should have been made operational in Member States by December 2012. Progress with implementation of the measures was to be reported electronically to the Commission in December 2012 through the Water Information System for Europe (WISE).

A preliminary assessment of the 2012 electronic WISE reports was undertaken in 2013 through the use of templates comprising a number of pre-defined questions, the answering of which by consultant Member State assessors provided the assessment of Member States’ progress. The results were presented to the Commission by the consultants in a Preliminary Assessment report in January 2014.

The preliminary assessment was taken further by undertaking an in-depth assessment of some key processes in developing programmes of measures and in relation to five key aspects/pressures (agriculture, chemicals, hydromorphology, urban waste water treatment and water abstraction) of the Water Framework Directive. This was again facilitated by the use of pre-defined questions within templates answered by Member State assessors.

The results were reported to the Commission in December 2014 as a European Overview report that provided an overview of the progress made by Member States in the development and implementation of programmes of measures for the first planning cycle. It was also based on the conclusions from the Commission’s 2012 assessment of the first River Basin Management Plans1, Member States’ electronic (WISE) reports to the Commission in December 2012 on the progress with implementation of their programmes of measures (summarised in the Preliminary Assessment report) and the information arising from the Commission’s bilateral meetings with Member States on their first River Basin Management Plans during 2013 and 2014. The report was used in support of the Commission’s Communication to the European Parliament and Council on progress with Water Framework Directive implementation and its associated Commission Staff Working Document, both to be published in March 2015.

This report is a summary of the findings of the preliminary and in-depth assessment of the progress with the implementation of the programmes of measures in Ireland.

References to River Basin Management Plans (RBMPs) and programmes of measures (PoMs) throughout this document relate to the first planning cycle unless explicitly stated otherwise.

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1 http://ec.europa.eu/environment/water/water-framework/impl_reports.htm
## 2. Questions used in the assessments

For the **preliminary assessment** the following assessment questions were asked:

- **Question 1.** What is the reported progress between 2009 and 2012 with the implementation of the Basic Measures set out in Article 11.3.a?
- **Question 2.** What is the reported progress between 2009 and 2012 with the implementation of the Other Basic Measures set out in Article 11.3b-I?
- **Question 3.** What is the progress with the implementation of Supplementary Measures between 2009 and 2012?
- **Question 4.** Are there Supplementary Measures in place to tackle each of the significant pressures for which Basic Measures are reported by Member States to be not enough to achieve WFD objectives? Which pressures are not tackled?
- **Question 5.** Which measures reported to be implemented in the first RBMP/PoM in 2009 have not been reported in 2012?
- **Question 6.** What is the status of implementation of the Key Types of Measures identified in the Member State, and what progress is expected over the duration of the first RBMP?
- **Question 8.** What is the reported overall progress on implementing the Programme of Measures? Are there differences between the RBDs in the Member State? What are the main obstacles to successful implementation (if any)?
  - 8a) What are the main achievements?
  - 8b) Improvements in status of water bodies?
  - 8c) What are the main obstacles?
  - 8d) Overall Progress?
- **Question 9.** How are the measures being financed? What are the main achievements, progress and obstacles in securing the budget for the PoMs?
  - 9a) Securing finance for the PoMs?
  - 9b) Funding source?
  - 9c) Overall progress?

For the **in-depth assessment** the following assessment questions were asked:

- **Question 1.** What are the impacts on water bodies reported for 2009?
- **Question 2.** Have the sources of the impacts been identified?
Question 3. If the sources of at least some of the impacts were identified, please indicate the relevant sources and pressures in the Excel spreadsheet provided in the document area to answer this question.

Question 4. Have the identified impacts been apportioned between the sources and sectors/drivers responsible for the pressures?

Question 4a. Are there different approaches to source apportionment between the RBDs within the MS?

Question 5. If no source apportionment was undertaken, how were measures assigned to the sectors to reduce pressures?

Question 6. How were the measures assigned across the polluters and activities/sectors responsible for the impacts?

Question 7a. Has the scale of the pressures arising from agriculture been quantified in terms of the reductions required to achieve WFD objectives?

Question 7b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the Nitrates Action Programmes?

Question 7c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.h basic measures?

Question 7d. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.g basic measures?

Question 7e. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?

Question 8a. Has the scale of the pressures arising from emissions, discharges and losses of chemicals been quantified in terms of the reductions required to achieve WFD objectives?

Question 8b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the Basic Measures required by Article 11.3.a (measures required by the IPPC Directive (96/61/EC and 2008/1/EC) which was superseded by the Industrial Emissions Directive (2010/75/EU) on 7 January 2014)?

Question 8c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.g and Article 11.3.k basic measures?

Question 8d. What measures are in place to address the related objectives under the Environmental Quality Standards Directive (2008/105/EC)?

  o Is there an inventory of the sources of chemical pollution?
  o Are mixing zones being used?
  o If mixing zones are used, does the plan indicate measures taken to reduce the extent of the mixing zone in the future?
  o Are there specific measures with the aim of progressively reducing pollution from priority substances?
- Are there specific measures with the aim of ceasing or phasing out emissions, discharges and losses of priority hazardous substances?

- Question 8e. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?

- Question 9a. Has the scale of hydromorphological pressures been quantified in terms of the reductions required to achieve WFD objectives?

- Question 9b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the Basic Measures required by Article 11.3.a?

- Question 9c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.i basic measures?

- Question 9d. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?

- Question 10a. Has the scale of the pressures arising from urban waste water treatment been quantified in terms of the reductions required to achieve WFD objectives?

- Question 10b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the national programmes for the implementation of the Urban Waste Water Treatment Directive?

- Question 10c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.g basic measures?

- Question 10d. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?

- Question 11a. Has the scale of the pressures arising from water abstraction been quantified in terms of the reductions required to achieve WFD objectives?

- Question 11b. How much of the gap to the achievement of WFD objectives was expected to be achieved by the Basic Measures required by Article 11.3.a?

- Question 11c. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.3.c and 11.3.e basic measures?

- Question 11d. How much of the gap to the achievement of WFD objectives was expected to be achieved by the implementation of Article 11.4 supplementary measures?

- Question 12a. Was a cost effectiveness analysis undertaken during the development of the programme of measures?

- Question 12b. Did the cost effectiveness analysis influence the selection of measures?

- Question 12c. What were the main factors that limited the use of a cost effectiveness analysis?

- Question 13. What are the effects/consequences of uncertainty in the Article 5 pressures and impacts analysis, monitoring and classification of status on targeting of measures to reduce pressures to achieve WFD objectives?

- Question 14. What are the main changes and improvements envisaged for the second planning cycle?
3. Contextual information on Ireland

There are 7 River Basin Districts (RBDs) in Ireland, 3 of which are international with the UK. A national approach is generally followed in the implementation of the WFD, with some differences in the International RBDs due to coordination with the neighbouring Member State (UK). The RBMPs were adopted on 6 July 2010 and reported to the Commission in October 2010.

In terms of surface water bodies (SWB), point source pressures were reported to be significant in 49% of SWBs across all RBDS (with the largest at 92% in RBD IEEA); diffuse sources in 56 % across all RBDS (with the largest at 92% in RBD IEEA); water abstractions in 9% (all RBDS - with the largest at 54% in RBD IEEA); water regulation and morphological alteration pressures in 8.4% across 6 RBDS (with the largest at 90% in RBD IEEA); river management pressures in 24% across all RBDS (with the largest at 90% in IEEA); transitional and coastal management pressures in 1% across all RBDS (with the largest at 4% in IEEA); other morphological pressures in 6% in one RBD (IEEA 90%); and other pressures in 8% across all RBDS (with the largest at 74% in IEEA).

For groundwater bodies, diffuse source pollution pressures were reported to be significant in 5 RBDS (13% of GWB nationally), point sources in 3 RBDS (0.8% of GWB nationally) and abstraction pressures in 2 RBDS (0.4% of GWB nationally). No other pressures were reported as being significant.

A total of 54.4% of natural SWB were reported to at good or better ecological status in 2009 with this percentage expected to increase to 68% by 2015. 85.2% and 99.5% of groundwater bodies were assessed as being at good chemical and good quantitative status, respectively, in 2009, increasing to 97.9% and 99.9%, respectively in 2015.
4. Role of basic measures and supplementary measures

Article 11.3 of the WFD states that basic measures are the minimum requirements to be complied with and shall consist of:

Paragraph a: those measures required to implement Community legislation for the protection of water, including measures required under the legislation specified in Article 10 and in part A of Annex VI (e.g. measures to achieve compliance with the Nitrates Directive and Urban Waste Water Treatment Directive)

Paragraphs b to l: measures that largely require binding rules in terms of, for example, the control of abstractions (paragraph e) (e.g. requires abstraction permits to be revised in line with WFD requirements), diffuse sources (paragraph h) (e.g. where phosphate, pesticides, sediment, organic pollution and ammonia from agriculture are identified as a pressure affecting the achievement of overall good status, controls must be established), and activities that affect hydromorphological conditions (paragraph i) (e.g. controls should be defined to ensure that actions in or near rivers do not negatively impact on morphological condition) that go beyond the national implementation of Article 11.3.a measures for the achievement of WFD objectives.

In certain situations basic measures alone will not be sufficient to achieve good status and so Article 11.4 supplementary measures may be needed. MS must first have basic measures that are compliant with Article 11.3 and second define supplementary measures and have a credible plan for securing and tracking progress on the established supplementary measures. Supplementary measures can be, for example, technical measures, advisory services or cooperative agreements between groups of stakeholders (see WFD Annex VI.B).

Basic and supplementary measures must add up to what is needed to address the pressures to allow the achievement of the WFD objectives.

Basic measures were reported to be insufficient to meet WFD objectives in all 7 RBDs for point source, diffuse source, water abstraction, hydromorphological, river management and other pressures on surface waters, and not enough in one RBD (IEEA) in terms of transitional and coastal water management and other morphological pressures. For groundwater in 6 RBDs, basic measures were reported as being insufficient in terms of diffuse source pressures, 4 RBDs for point source pressures and 2 RBDs for water abstraction pressures to meet WFD objectives.

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2 Meeting of the Strategic Co-ordination Group, 4 November 2013, Agenda point 4.a. Clarification on WFD programmes of measures (Article 11).
5. Targeting of measures to reduce pressures and impacts to achieve WFD objectives

Measures should be targeted in terms of their type and extent to ensure that pressures are addressed and that this will deliver improvements towards achieving good status or potential in the individual water bodies. The measures should be designed based on the assessment of the actual status of the water body, supplemented with the information from the analysis of pressures and impacts affecting the water body.

In terms of the objective of achieving good status by 2015, the aim would be to identify the gap in water body status/potential expected by 2015 and the status required by the Water Framework Directive. How large the gap that must be filled to achieve WFD objectives in any particular River Basin District and Member State will depend, for example, on how Member States have implemented the requirements under other Directives (e.g. the relative stringency of measures in national Nitrates Action Plans) and policies, as well as differences in the type, extent and magnitude of pressures on water bodies. The gap should be filled with measures that would be implemented under the Water Framework Directive for those water bodies expected to be failing objectives in 2015 without exemptions.

The gap to the achievement of objectives will be caused by significant pressures on water bodies: the sources and sectors responsible will have to be identified to determine where actions on the ground are needed to reduce pressures to levels in/on water bodies compatible with the achievement of objectives. This may be achieved through the use of source apportionment to give a clear picture of the most important sources for a given pressure or impact. In this context a source might be considered as a combination of a pressure type (e.g. diffuse or point source pollution combined with the responsible sector or driver (e.g. diffuse – agriculture, diffuse – forestry)).

The required reduction of the pressures to fill the gap to the achievement of objectives should then be quantified; this can be expressed in different ways depending on the nature of the pressure. For example: for nutrient pollution it could be in terms of the required reduction in the loads of nitrogen and phosphorus in the receiving water bodies; for pressures arising from the hydromorphological alteration of water bodies it could be expressed as number of barriers that have conditions not compatible with the achievement of Water Framework Directive objectives; and, for water abstractions the volume of water abstracted or diverted that has to be reduced to achieve objectives.

Apportionment of impacts and pressures to sources

As described above source apportionment information is required so that measures can be targeted effectively at sources to reduce the pressures to levels compatible with the achievement of WFD objectives.

A qualitative source apportionment of identified impacts between the sources and sectors responsible for the impacts was undertaken but without the relative contributions were not assessed or quantified.

A national approach to Article 5 risk assessments was undertaken in Ireland which sought to link pressures to likely impacts in water bodies for all water categories. Based in this exercise, Gaps in knowledge were identified and thirteen additional national studies were commissioned for major pressures/impacts to address the gaps. These studies supported a national approach to identifying the Programme of Measures (PoMs) that were refined at the RBD and at a more operational, local scale and termed the Water Management Unit (WMU). A link between pressures and impacts has been made and used to derive appropriate measures. Operational plans have been derived at the WMU level that describe the dominant pressures and their extent (i.e. the number of water bodies affected by impacts associated with a pressure)
and associated measures. However, the source apportionment has not been quantified at the water body or the WMU level such that the gap to the achievement of water body objectives has not been quantified.

**Approaches for assigning measures to sectors/sources to reduce pressures**

The measures identified focus primarily on basic measures (Article 11.3.a). They have been applied to sectors based on a combination of a source-based apportionment (i.e. point versus diffuse sources of phosphorus with some differentiation into agriculture sources and wastewater discharges) and expert judgement derived from experience of water management. The sectors identified are primarily those that have traditionally been regulated and subject to improvement measures and which have legal mechanisms and enforcement available.

**Assigning measures across the polluters and activities/sectors responsible for the impacts**

The assignment of measures to sectors is currently weak and is not based, in all cases, on impacts detected in water bodies or known to be present in individual WMUs. There is a strong dependence on known pressures and their associated risk assessments. Where measures have been assigned, this has been based on contributions of the sector to the pressure and risk rather than impact detected. This approach has enabled measures to be assigned to sectors contributing most to the pressures.

**Cost effectiveness**

Cost-effectiveness analysis (CEA) is an appraisal technique that provides a ranking of alternative measures on the basis of their costs and effectiveness, where the most cost-effective has the highest ranking.

Uncertainty on costs, effectiveness and time-lagged effects of measures needs to be dealt with throughout the economic analysis process associated with the WFD, and more generally throughout the process of identifying measures and developing the RBMP. Sources of uncertainty are highly diverse according to situations and river basins, but will exist with regards to the assessment of pressures, impacts, baseline, costs or measures effectiveness. It is important that key areas of uncertainty and key assumptions made for the analysis are clearly spelt out and reported alongside the results of the analysis.

The cost-effectiveness of individual, or combinations, of measures was not undertaken for the first cycle programmes of measures due, in part, to the lack of information on the costs of measures for some pressures.

**Assessment of Disproportionate costs**

An extended time to the achievement of objectives or less stringent objectives can be justified on the grounds of disproportionately expensive measures (Articles 4.4 and 4.5).

Ireland applied no exemptions on the grounds of disproportionately expensive measures because no economic analysis was undertaken to support such exemptions.

**Effects of uncertainties**

Measures should be targeted in terms of their type and extent to ensure that pressures are tackled and reduced, and that this will deliver improvements towards achieving good status or potential in the individual water bodies. The measures should be designed based on the assessment of the actual status of the water body, supplemented with the information from the analysis of pressures and impacts affecting the water body.
Therefore, uncertainty in the robustness and suitability of methods used in the Article 5 analysis of pressures and impacts, and/or in the confidence of the results of monitoring and the subsequent assessment of ecological and chemical status can fundamentally affect how measures are targeted at water bodies at risk of failing objectives or those that are assessed as being at less than good status from all significant pressures in a RBD.

Measures were identified based on national scale assessments of risks supplemented, where possible, with existing monitoring information. Measures were assigned at the WMU level with some regard to the pressures acting and their relative proportional contribution to the total pressure where this was assessed. Expert judgement formed a significant part of the process and no explicit account was undertaken of the uncertainty when targeting measures.
6. Progress with the implementation of the Basic Measures set out in Article 11.3.a

All eleven Directives are reported to have been implemented in all seven of RBDs in Ireland. There is generally a description of the relevant implementing national Regulations, the required actions and of those responsible for the actions. Often there is no explicit link made with, or explanation of, the actions relevant to WFD implementation. However for some Directives, and in particular for the IEEA RBD, those links are made. This is the case for the Drinking Water Directive, Environmental Impact Assessment Directive, Plant Protection Products Directive (PPP) and IPPC Directive. There has been some progress/changes in the implementation of the Directives between the publication of the RBMP in 2010 and the 2012 report. For example: adoption of national Regulations transposing the PPP Directive in 2012; revision of the Regulations transposing the Habitats and Birds Directive; review and amendment of licences required under the IPPC Directive; and, increased compliance with effluent quality standards under the UWWT Directive.
7. Progress with the implementation of Basic Measures set out in Article 11.3b-l

Reported progress

Figure 7.1 Reported progress with implementation of basic measures (Article 11.3 (b) to (l) in 2012) (PoM aggregation report)

All of the basic measures required under Article 11.3.b-l are on-going in all RBDs except for controls of artificial recharge or augmentation of groundwater. This has not started because this practice is not undertaken in Ireland, though the requirements of the measure have been implemented in Irish Regulations. Four of the measure types are substantially delayed because of the on-going major reform of the water sector in Ireland which includes the consolidation of all relevant legislation in a proposed Water Quality Framework Bill. Delays in the publication of the Bill of approximately one year are reported for Article 7 measures and for controls on water abstractions, and 18 months for measures to control hydromorphological impacts. Progress has also been reported in terms of: measures required for priority substances (revision of Regulations, review of current licences); measures required for point sources (review and revision of licences); and, measures for diffuse sources (revision of Regulations, new consent requirements for forestry). Expected progress over coming period is also reported in terms of production of an inventory of emissions of Priority Substances (PS) and Priority Hazardous Substances (PHS) by 2013; the production of pollution reduction plans for PS and PHS by 2014; and the completion of a review of point source licences in 2013.

Delays in implementation

Member States were asked to report if there were substantial delays in the implementation of basic measures required under Article 11.3. b to l.

Ireland reported delays in 36% of their Article 11.3 (b to l) basic measures due to legislation/regulation administrative barriers related largely to the restructuring of the water sector.
Financing of measures

Member States were asked to report on the source of EU funds for the financing of Article 11.3.b to I basic measures.

For most (96%) measures in Ireland, non-EU funds were used to finance these measures with Life+ EU funds being used for the remainder (4%).
8. Supplementary measures (Article 11.4)

The need for supplementary measures

Supplementary Measures are those measures designed and implemented in addition to the Basic Measures where they are necessary to achieve the environmental objectives of the WFD as established in Article 4 and Annex V. Supplementary Measures can include additional legislative powers, fiscal measures, research or educational campaigns that go beyond the Basic Measures and are deemed necessary for the achievement of objectives.

In 2010, Member States reported details of the Supplementary Measures planned (in 2009) to tackle significant pressures on surface and ground waters where Basic Measures were not enough to meet WFD environmental objectives. Details of the measures were reported in a List of Supplementary Measures specific to each RBD. Each Supplementary Measure was to be reported with a national code. In some Member States, national codes and measures may be common to more than one RBD, whereas in others the same measure may have a different code in each RBD. Therefore, the number of different measures used at a national level does not necessarily equate to the sum of the different measures used in the component RBDs. Also, the same Supplementary Measure may be applicable to more than one pressure type.

Member States were asked to report which Supplementary Measures were used to tackle specific pressures (at an aggregated and/or disaggregated level) when Basic Measures were not enough: these are indicative of those that have been applied or planned in 2009. There are also examples of where not all Supplementary Measures in the List of Supplementary Measures are reported to be used or planned in 2009.

In 2012, Member States reported some additional aspects on Supplementary Measures including their state of implementation (‘not started’, ‘on-going’ or ‘completed’), whether their implementation was substantially delayed and, if so, the reasons for the delay.
Figure 8.1  Number of sub-units within the Member State (IE) where basic measures are enough (Yes) or not enough (No) to tackle significant pressures on surface water bodies (7 sub-units reported in IE).
Source: WISE PoM reports
Figure 8.2  Number of river basin districts within the Member State (IE) where basic measures are enough (Yes) or not enough (No) to tackle significant pressures on ground water bodies. 7 RBDs reported in IE.
Source: WISE PoM reports

Progress with the implementation of Supplementary Measures between 2009 and 2012

Surface Waters

Figure 8.3  State of implementation of supplementary measures in relation to significant pressures of surface waters in 2012

Number in brackets is the number of supplementary measures tackling the pressure.
Note: a measure may tackle more than one pressure.
Source: WISE PoMs Reports
Groundwater

Figure 8.4  State of implementation of supplementary measures in relation to significant pressures on ground waters in 2012

The most significant pressures in terms of the proportion of affected surface water bodies in Ireland are diffuse source (56% of surface water bodies (SWB)) point source (49%), river management (24%), water abstraction (9%), water flow regulations and morphological alterations (8%), other pressures (8%), other morphological alterations (7%) and transitional and coastal water management (1% of SWB and 19% of transitional and coastal water bodies).

The pressures which had the largest proportion of completed supplementary measures for surface waters were water abstraction (19%) and diffuse sources (18%), and the smallest proportion was for other morphological pressures. In terms of on-going supplementary measures the largest proportions (93%) were for point sources and other pressures.

The pressures with the largest proportion (28%) of not-started supplementary measures were river management and water flow regulation and morphological alteration pressures: this reflects the current major revision of water related legislation in Ireland which will include measures to meet the requirement of Article 11.3.i. Substantial delays were reported for 5 on-going measures, 3 relating to water abstraction (because of major reform in water sector), 1 to diffuse source pollution (because the measure is of lower priority) and 1 to river management (because Regulations for appropriate morphological measures are awaited) pressures.

In terms of pressures on groundwater, the most significant in Ireland are diffuse source (13% of groundwater bodies (GWB)), point source (~1% GWB) and abstraction pressures (<1% GWB). In all cases where basic measures are not considered enough to meet WFD objectives, there are supplementary measures in place. Most of the supplementary measures are on-going with only 1 as being completed and none, not started. One of the supplementary measures relating to water abstraction was substantially delayed because of the consequences of the reform of the water sector in Ireland and the other to diffuse pollution because of the relatively low priority given to the measure.
Delays in implementation

As with Article 11.3 b to l basic measures, Member States were asked to report whether there was a substantial delay in implementing supplementary measures included in the first RBMPs in 2009, and to explain any such delays.

In Ireland, 5.3% of (the 470) supplementary measures were reported to be delayed because legislation/regulation/administration barriers related to the reform of the water sector. Other reasons given were funding/financing obstacles (3.8% of measures), research/investigation/developments/further work needed (1.3%), not cost effective (1.3%), low priority (1.3%), technical barriers/difficulties (0.2%) the planned measures were no longer needed (0.2%). It is not clear how measures were determined to be “not cost effective” (no cost effectiveness analysis has been carried out).

Financing of supplementary measures

Member States were also asked to report on the source of EU funds for the financing of supplementary measures.

As for Article 11.3.b to l basic measures, non-EU funds (95%) were mostly used to finance supplementary measures in Ireland, with Life+ funds financing %).

Supplementary Measures in place to tackle each of the significant pressures for which Basic Measures are not enough to achieve WFD objectives

From the reported information, there are supplementary measures for each of the significant pressures where basic measures are insufficient to meet WFD objectives. In addition, supplementary measures are also reported for pressures and categories where there are no water bodies failing objectives (i.e. diffuse source pressures in RBD IEGNISH and for other pressures in 6 RBDs in lake, transitional and coastal water categories.

All supplementary measures relating to 2009 were also reported in 2012. In 2012, 5 supplementary measures were reported that were not included in the data relating to 2009. Of these, 4 were in fact included in the list of all supplementary measures in 2009 but were not included in the specific surface water and groundwater lists of supplementary measures in 2009. It is not clear why this is the case. The remaining supplementary measure is ‘new’ in 2012 and relates to the governance of water and the establishment of ‘Irish Water’, a national water utility.


9. **Reporting of Key Types of Measures**

In 2012, Member States were asked to report on 16 defined Key Types of Measures (KTM). These were expected to incorporate Article 11.3 (b to l) basic measures and supplementary measures. Their implementation and completion were expected to deliver the bulk of the actions required to achieve WFD objectives, i.e. to reduce significant pressures to the extent required to achieve good status or to prevent deterioration of status in high and good status water bodies. The defined KTMs were:

1. Construction or upgrades of wastewater treatment plants beyond the requirements of the Directive on Urban Waste Water Treatment;
2. Reduce nutrient pollution in agriculture beyond the requirements of the Nitrates Directive;
3. Reduce pesticides pollution in agriculture;
4. Remediation of contaminated sites (historical pollution including sediments, groundwater, soil);
5. Improving longitudinal continuity (e.g. establishing fish passes, demolishing old dams);
6. Improving hydromorphological conditions of water bodies other than longitudinal continuity;
7. Improvements in flow regime and/or establishment of minimum ecological flow;
8. Water efficiency measures for irrigation (technical measures);
9. Progress in water pricing policy measures for the implementation of the recovery of cost of water services from households;
10. Progress in water pricing policy measures for the implementation of the recovery of cost of water services from industry;
11. Progress in water pricing policy measures for the implementation of the recovery of cost of water services from agriculture;
12. Advisory services for agriculture;
13. Drinking water protection measures (e.g. establishment of safeguard zones, buffer zones etc.);
14. Research, improvement of knowledge base reducing uncertainty;
15. Measures for the phasing-out of emissions, discharges and losses of priority hazardous substances or for the reduction of emissions, discharges and losses of priority substances;
16. Upgrades or improvements of industrial wastewater treatment plants (including farms) beyond the requirements of the Integrated Pollution Prevention and Control (IPPC) Directive.

Member States also were given the possibility to report different or additional KTMs according to their specific situations and requirements.

Quantitative indicators for the scale and progress with the implementation of measures were proposed for each of the defined Key Types of Measure. Member States could also report their own indicators if the proposed ones were not appropriate for their specific national situations.
Sections 10 to 14 show and describe the progress made by Ireland in the implementation of KTMs primarily associated with the five key topics subject to the in-depth assessment: not all KTMs were reported and/or applicable to the situation in Ireland. Some of the KTMs are not necessarily associated with the 5 selected Topics: these are described in Section 15. As indicated above, Member States were also able to report different KTMs from the defined KTMs; these are also described in Section 15.
10. Progress with implementation of measures to reduce pressures (nutrients, organic matter) from agriculture

Quantification of the scale of agricultural pressures

A risk assessment for phosphorus has enabled the proportion of P from major sources to be quantified in percentage terms for each Water Management Unit (WMU). This has not been related to the objective for P at the water body level and therefore the scale of the reduction required has not been quantified.

There is no reported quantification of the effects of measures in terms of reductions expected. The PATHWAYS project summarised for the bilateral meeting suggests that tools now exist to enable a quantification of the scale of the pressures to be reduced.

Assessment of measures for the achievement of WFD objectives

In response to specific questions from the Commission during the bilateral meeting, no quantitative assessment of the likely reductions resulting from the NAP was provided.

IE has adopted a whole territory approach to the ND. Other basic measures are expected to deliver improvements but the extent has not been quantified.

WISE 2010 information indicates that there are no planned measures for point sources from agriculture.

IE indicated in response to Commission questions at the bilateral meeting that measures to support improvements to water quality for part of the current RDP and will continue to features in the new RDP that is under development subject to approvals and budget constraints. The implications of Food Harvest 2020 will increase agricultural pressures in some areas of the MS. An impact assessment of this policy in terms of the impact on WFD objectives is underway.
**Key types of measure**

KTM2. Reduce nutrient pollution in agriculture beyond the requirements of the Nitrates Directive

**Figure 10.1** Percentages of measures/indicators associated with KTM2 that were reported as being not started, on-going and completed in 2012
Key to indicators:
The annotations next to each bar in the Figure shows “RBDCode: Indicator number: (value of the indicator when 100% completed)”:

2.1 Area of agricultural land covered by measures (km$^2$) beyond the requirements of the Nitrates Directive in this case agricultural land covered by General Binding Rules
Other (1) Funding provided per annum for the Agricultural Catchments Programme - national values
Other (2) Number of Teagasc Projects - national value
Other (3) The approximate number of farm inspections carried out every year - national value
Other (4) The number of inspections carried out on authorised derogation farms annually - National values
Other (5) Implementation of GAP regulations - national value
Source: WISE PoM Reports

This KTM was reported for all RBDs in Ireland. Six measures applicable in each RBD were associated with this KTM:

1. A national value is presented for the area of agricultural land covered by the Irish Good Agricultural Practice Regulations and it is indicated that the measure is completed.

2. Another measure reported is the number of Teagasc research projects which focus on, for example, reducing nitrate leaching through the understanding and management of the soil nitrogen cycle and assessing mitigation strategies to minimise incidental and chronic nutrient losses. A national figure is reported which indicates that of the 27 projects, 11 % are not started, 78 % are on-going and 11 % are completed. There is no information on their likely status in 2015.

3. Another indicator/measure reported is in terms of the funding for the nationwide Agricultural Catchments Programme (ACP): the values reported for each RBD are the national figures. Funding of approximately €2m per year has been provided for the ACP. The value for not-started is the funding for the next 3 years (until 2015); for on-going, annual funding for the current 4 year phase); completed, funding for the first 4 years up to 2011. The ACP is expected to provide the scientific evidence for the effectiveness of the agricultural measures contained in the National Action Programme, i.e. the GAP Regulations. The ACP completed an initial 4-year phase in 2011 and the continuation of the Programme to 2015 has been approved. Under the ACP, six agricultural catchments have been established which cover a range of important agricultural typologies including derogation dairy, tillage, drumlin and karst. An intensive advisory service is provided through the programme and the catchments have been instrumented to monitor nutrient sources and loss pathways to surface and groundwater bodies. There are in excess of 300 farmer stakeholders fully participating in the ACP.

The 4th action/indicator reported is the approximate number of farm inspections carried out every year (6000 reported as completed). Inspections are undertaken on 1% of all farms (circa 1,350) every year in the context of cross-compliance arrangements under the Single Payment Scheme. National figures (all completed) are provided in each RBD report.

The 5th action/indicator reported is on the approximate number of inspections carried out on authorised derogation farms annually (3% of 4000 farms, nationally). Certain farmers operate a derogation from the Nitrates Directive limit of 170 kg up to a maximum of 250 kg of nitrogen per hectare subject to strict conditions. Approximately 4,000 nitrates derogations have been authorised annually to date. The completed value of 120 is the number of inspections carried out on authorised derogation farms annually.

The 6th indicator is in terms of the publication/adoption of the Irish GAP regulations which give legal effect to the National Action Programme. The GAP regulations implement and go beyond the requirements of the Nitrates Directive. Ireland has opted to implement the Nitrates Action Programme on a whole territory basis.

KTM12: Advisory services for agriculture

This KTM was not reported by Ireland.
11. Progress with implementation of measures to reduce pressures from chemicals

Quantification of the scale of chemical pressures

Ireland reported the number of water bodies failing due to identified Priority Substances but not for River Basin Specific Pollutants (RBSPs). The information in the first cycle RBMPs was supported by a national screening exercise comprising both PS and RBSP that were judged to be likely to occur in Ireland’s waters. A later national risk assessment project was undertaken to supplement the risk assessment for pesticides (diffuse mobile organics) and groundwater bodies. Ireland provided further information on the percentage of river water bodies failing EQSs for PS/RBSP based on monitoring undertaken in 2010 to 12.

Assessment of measures for the achievement of WFD objectives

Basic and supplementary measures

Permitting regimes under Section 4 of the Water Pollution Act are in place and reviews of existing permits are underway. Ireland reported partial progress to the Commission in 2012 with the reviews.

Measures required by the EQS Directive

Inventory of the sources of chemical pollution

WISE summaries suggest inventories exist for PS, RBSP, deoxygenating substances and nutrients.

Use of mixing zones

The concept of mixing zones is being considered in the location of monitoring sites but no calculation/modelling has been used to delineate them. This is being considered for surface water categories (except rivers) for second cycle plans.

Measures taken to reduce the extent of the mixing zone in the future

Ireland has not delineated mixing zones and therefore measures to explicitly reduced their extent have not been derived.

Specific measures with the aim of progressively reducing pollution from priority substances

Some basic measures are in place implementing the IPPC/IED with associated permitting regimes. Ireland reported progress with reviewing existing permits in 2012.

Specific measures with the aim of ceasing or phasing out emissions, discharges and losses of priority hazardous substances

No information on specific measures was available.
Key types of measure

KTM3. Reduce pesticides pollution in agriculture

Figure 11.1 Percentages of indicator/measures associated with KTM3 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Three ‘other’ indicators of activities/actions under this KTM are reported for all 7 RBDs:

1. Transposition of Pesticide Use Directive into Irish law in 2012 (completed);

2. 2012 was reported as the first year of mandatory 3 year cycle of pesticide use surveys. Reported as percentage completed (33), and percentage not started (66);
3. Completion of a national action plan during first quarter of 2013 (reported as on-going).

**KTM15: Measures for the phasing-out of emissions, discharges and losses of priority hazardous substances or for the reduction of emissions, discharges and losses of priority substances**

**Figure 11.2** Percentages of indicator/measures associated with KTM15 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Two indicators of actions taken under this KTM are reported and both are applicable to all RBDs. In terms of the number of permits issued or updated, 535 (72%) of the 744 reported are not started and the remaining 209 (28%) as completed. In terms of the number of projects/measures, of the 21 reported, a third was not started, a third with on-going construction and the remaining third as completed. The 21 projects/measures were equally split across the 7 RBDs. There was no explanation of the indicators and it is not known whether the not started and on-going measures will be completed by 2015.

**KTM16: Upgrades or improvements of industrial wastewater treatment plants (including farms) beyond the requirements of the Integrated Pollution Prevention and Control (IPPC) Directive**

This KTM was not reported by Ireland.
12. Progress with implementation of measures to reduce pressures from hydromorphological alterations

Quantification of the scale of pressures from hydromorphological alterations

No information found.

Assessment of measures for the achievement of WFD objectives

National studies on freshwater and marine morphology supported the first cycle RBMPs and included lists of generic measures. The main obstacle to introducing measures to counter this pressure was the lack of a legal mechanism. The introduction of such a mechanism is the current priority for Ireland.

Key types of measure

KTM5: Improving longitudinal continuity (e.g. establishing fish passes, demolishing old dams)

This KTM was not reported by Ireland.

KTM6: Improving hydromorphological conditions of water bodies other than longitudinal continuity

This KTM was not reported by Ireland.
13. Progress with implementation of measures to reduce pressures from urban waste water treatment

Quantification of the scale of the pressures

A source apportionment for phosphorous in terms of diffuse and point source contributions has been undertaken as part of the Article 5 characterisation indicating the scale of the risk to achieving status objectives from diffuse and point source nutrient pressures. The point source component will mainly comprise UWWTD-relevant WWTPs. The number of water bodies failing EQSs for PS and RBSP has been provided but the links between these substances and UWWT-relevant sources has not been established. The location of on-site wastewater treatment systems has been determined on a national scale but the extent of the impact has not been determined. Ireland reported progress on the implementation of the UWWTD which identifies the number of WWTPs requiring upgrades to comply with UWWTD requirements. It is unclear whether all UWWTD relevant WWTPs have had their permits reviewed to reflect compliance with WFD objectives in the WBs to which they discharge.

Assessment of measures for the achievement of WFD objectives

UWWTD basic measures were reported to be insufficient to meet WFD objectives in all 7 RBDs and for all water categories. Permits under Section 4 of the Water Pollution Act cover UWWTD discharges. Existing permits are under review and partial progress was reported to the Commission in 2012.

Basic measures for point source discharges were reported as being insufficient for all 7 RBDs and for all water categories.
Key types of measure

KTM1. Construction or upgrades of wastewater treatment plants beyond the requirements of the directive on urban waste water treatment

Figure 13.1  Percentages of indicator/measures associated with KTM1 that were reported as being not started, planning on-going, construction on-going and completed in 2012

<table>
<thead>
<tr>
<th>Indicator/measures</th>
<th>% Not Started</th>
<th>% Planning On-Going</th>
<th>% Construction On-Going</th>
<th>% Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBNIENB 1.2 (2)</td>
<td>0%</td>
<td>10%</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>GBNIENW 1.2 (68)</td>
<td>20%</td>
<td>30%</td>
<td>10%</td>
<td>40%</td>
</tr>
<tr>
<td>IEEA 1.2 (82)</td>
<td>30%</td>
<td>20%</td>
<td>10%</td>
<td>40%</td>
</tr>
<tr>
<td>IEGBNISH 1.2 (115)</td>
<td>10%</td>
<td>50%</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>IIESE 1.2 (74)</td>
<td>20%</td>
<td>40%</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>IIESW 1.2 (78)</td>
<td>10%</td>
<td>30%</td>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>IEWE 1.2 (34)</td>
<td>0%</td>
<td>10%</td>
<td>40%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDCode; Indicator number; (value of the indicator when 100% completed)”

1.2 Number of projects/measures
Source: WISE PoM Reports

There are 453 improvements reported across all 7 RBDs. This total may include multiple improvements within one plant and therefore the number does not refer to the number of WWTPs. 39% of the improvements are categorised as not started, 8% have planning on-going and 30% have construction on-going. There is no information as to whether the non-completed improvements will all be completed by 2015. There are an additional 159 improvements for which state of implementation is not known: these were not included in the reported values.
14. Progress with implementation of measures to reduce pressures from water abstractions

Quantification of the scale of the pressure

A surface and groundwater risk assessment was undertaken to support first cycle RBMPs that identified water bodies at risk from abstraction pressures.

Assessment of measures for the achievement of WFD objectives

Ireland indicated 6 RBDs where basic measures would be insufficient to meet WFD objectives in lake and river water bodies for water abstraction.

There is currently a legislative gap for the control of abstractions and this is being addressed as part of a wide ranging review of the legislative framework.

Key types of measure

KTM7: Improvements in flow regime and/or establishment of minimum ecological flow

This KTM was not reported by Ireland.

KTM8: Water efficiency measures for irrigation (technical measures)

This KTM was not reported by Ireland.
15. Reporting of other Key Types of Measure

This section summarises the progress with the implementation of the defined KTMs not included within the assessment of the specific pressures/issues. Member States were also given the possibility to report different or additional KTMs according to their specific situations and requirements: these are also summarised in this section.

KTM4: Remediation of contaminated sites (historical pollution including sediments, groundwater, soil)

Figure 15.1 Percentages of indicator/measures associated with KTM4 that were reported as being not started, planning on-going, construction on-going and completed in 2012

<table>
<thead>
<tr>
<th>RBD Code</th>
<th>Indicator Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>IESW 4.2</td>
<td>(1)</td>
<td>100%</td>
</tr>
<tr>
<td>ISEE 4.2</td>
<td>(2)</td>
<td>100%</td>
</tr>
<tr>
<td>IEGBNISH</td>
<td>4.2 (1)</td>
<td>100%</td>
</tr>
</tbody>
</table>

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDC ode; Indicator number; (value of the indicator when 100% completed)"
4.2 Number of sites subject to measures
Source: WISE PoM Reports

This KTM was reported for 3 RBDs: Shannon; South East and South West. The indicator is in terms of the number of sites subject to measures for the remediation of contaminated sites - 4 sites all with on-going actions. There are on-going studies into the 4 GWBs at poor status due to contaminated land from mines.

KTM9: Progress in water pricing policy measures for the implementation of the recovery of cost of water services from households

Figure 15.2 Progress associated with KTM9 reported in 2012

<table>
<thead>
<tr>
<th>RBD Code</th>
<th>Indicator Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEA 9 Other</td>
<td>(100)</td>
<td>100%</td>
</tr>
<tr>
<td>IEEGBNISH 9 Other</td>
<td>(100)</td>
<td>100%</td>
</tr>
<tr>
<td>IEESE 9 Other</td>
<td>(100)</td>
<td>100%</td>
</tr>
<tr>
<td>IESW 9 Other</td>
<td>(100)</td>
<td>100%</td>
</tr>
<tr>
<td>IEEW 9 Other</td>
<td>(100)</td>
<td>100%</td>
</tr>
</tbody>
</table>

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDC ode; Indicator number; (value of the indicator when 100% completed)”
Other: domestic water charges will be fully implemented
Source: WISE PoM Reports

The same information was reported for each RBD. Recovery of the cost of water services in accordance with Article 9 of the WFD is being advanced through the introduction of domestic water charges. There is currently no charge for domestic water use in Ireland. However, a major reform of the water sector is underway with the forthcoming establishment of Irish Water as a national utility company with wide-ranging functions to be determined by primary legislation. Irish Water will manage future domestic supply charges. It is expected that Irish Water will be fully operational by 2014. The figure provided is the percentage progress (40%) of the domestic pricing policy measure under the new reforms. It is expected that domestic water charges will be fully implemented by 2014 (100%).

KTM10: Progress in water pricing policy measures for the implementation of the recovery of cost of water services from industry

Figure 15.3 Progress associated with KTM10 reported in 2012

Key to indicators measures
The annotations next to each bar in the Figure shows “RBCode; Indicator number; (value of the indicator when 100% completed)”
Other Structure for non-domestic water supply in place
Source: WISE PoM Reports

The same information was reported for each RBD. The provision of water in Ireland is currently the responsibility of the relevant local authorities who are designated under statute as water services authorities. There are 34 of these authorities. It is the role of the water service authorities to apply water charges in order to recover the cost of providing the water services to non-domestic users. The figures provided are a percentage. A charging structure for non-domestic water supply is currently in place (100% complete).
KTM11: Progress in water pricing policy measures for the implementation of the recovery of cost of water services from agriculture

**Figure 15.4 Progress associated with KTM11 reported in 2012**

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDCODE; Indicator number; (value of the indicator when 100% completed)”
Other Charging structure for non-domestic water supply in place
Source: WISE PoM Reports

The same information was reported for each RBD. The provision of water in Ireland is currently the responsibility of the relevant local authorities who are designated under statute as water services authorities. There are 34 of these authorities. It is the role of the water service authorities to apply water charges in order to recover the cost of providing the water services to non-domestic users. The figures provided are a percentage. A charging structure for non-domestic water supply is currently in place (100% complete).

KTM13: Drinking water protection measures (e.g. establishment of safeguard zones, buffer zones, etc.)

**Figure 15.5 Progress associated with KTM13 reported in 2012**

Key to indicators measures
Two indicators of actions taken under this KTM are reported and both are applicable to all RBDs. For indicator 13.1, the values are in terms of the national number of Drinking Water Safety plans in place at the end of 2012: 288 (8%) out of 3497. Each drinking water scheme is required to have a Drinking Water Safety Plan in place. There is no information on how many would be expected to be in place by 2015. The other indicator is in terms of the percentage of Groundwater Protection schemes that have been completed in each RBD. 100% is reported for each RBD except for the Eastern RBD where 95% is reported.

**KTM14: Research, improvement of knowledge base reducing uncertainty**

**Figure 15.6** Percentages of indicator/measures associated with KTM14 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Two indicators of actions taken under this KTM are reported and both are applicable to all RBDs. In terms of the estimated total costs of the measures, the figure provided is the amount of money provided through the EPA’s STRIVE funded research projects in the thematic area of Water and the Aquatic Environment: €654,173.05 has been spent on completed projects and €2,702,936.28 is the amount being provided for on-going projects. There is no information whether all on-going projects will be completed by 2015. The second indicator is the number of research projects and the figures provided are the number of EPA STRIVE funded projects in the thematic area of Water and the Aquatic Environment: 18 (42%) of the 43 projects are on-going and 25 (58%) are completed.
Summary assessment on the state of implementation of Key Types of Measure

Six of the 16 KTM were not reported by Ireland. Three of these relate to hydromorphological alteration pressures which are significant in Ireland (~24% of SWB). Similarly KTM12 relates to advisory services for agriculture: reported supplementary measures include this type of action. In most cases for the reported KTM there was no information on the expected progress to be made over the next 3 years of the first planning period.

New Key Types of Measures

New KTM1: Assess CSO and Water Quality Impact from Urban Pressures

Figure 15.7 Percentages of indicator/measures associated with New KTM1 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Assess CSO and Water Quality Impact from Urban Pressures: This has only been reported for one RBD (IEEA) with 2 of the 4 water bodies in which the measure is planned not started and in the other 2 water bodies as completed. This measure appears to be targeted to point source pressures even though this is not explicitly stated.

New KTM2: Carry out septic system inspections and upgrades

Figure 15.8 Percentages of indicator/measures associated with New KTM2 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Carry out septic system inspections and upgrades: This has only been reported for the IEEA RBD. This measure is not started in 10 water bodies in which it is planned and has been completed in 15 other water bodies. There is no indication as to whether the not started measures will be completed by 2015. This measure appears to be targeted to point source pressures even though this is not explicitly stated.
**New KTM3: Collection System - Upgrades and rehabilitation**

**Figure 15.9** Percentages of indicator/measures associated with New KTM3 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Collection System - Upgrades and rehabilitation: This has only been reported for the IEEA RBD. This measure is not started in 6 water bodies in which it is planned and has been completed in 11 other water bodies. There is no indication as to whether the not started measures will be completed by 2015. This measure appears to be targeted to point source pressures even though this is not explicitly stated.

**New KTM4: Conduct Farm Surveys**

**Figure 15.10** Percentages of indicator/measures associated with New KTM4 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Conduct Farm Surveys: This has only been reported for the IEEA RBD. This measure is not started in 500 water bodies for which it is planned and has been completed for 205 other water bodies. It is not that clear whether or not “number of water bodies” is the correct indicator unit in this case. There is no indication as to whether the not started measures will be completed by 2015. This measure appears to be targeted to diffuse source pressures even though this is not explicitly stated.
New KTM5: Control of environmental impacts from forestry

Figure 15.11  Percentages of indicator/measures associated with New KTM5 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Control of environmental impacts from forestry: This measure is applied in all RBDs and is to do with mandatory guidance for the forestry sector. All 11 guidelines are reported as completed and they include guidelines on the potential impacts on freshwater pearl mussel populations and in relation to otters. This measure appears to be targeted to diffuse source pressures even though this is not explicitly stated.

New KTM6: Measures taken to control Invasive Alien Species

Figure 15.12  Percentages of indicator/measures associated with New KTM6 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Control of Invasive Alien Species: This measure is reported for all 7 RBDs though it is named “Risk Assessment of Invasive Alien Species”. The measure is reported to be completed in all RBDs. The indicator is reported in terms of reports (1 measure) with a risk assessment of non-native species in Ireland (not all water related) and the implementation of new regulations. The second report is due in 2013. Part 6 of the new regulations pertaining to birds and natural habitats and published in 2011 covers the prohibition
on introduction and dispersal of certain species and the prohibition on dealing in and keeping certain species. This measure is targeted to “other pressures” in the terminology used for WFD reporting.

**New KTM7: Control of unsewered waste water discharges**

**Figure 15.13** Percentages of indicator/measures associated with New KTM7 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Control of unsewered waste water discharges: This measure is reported for all 7 RBDs. The indicator used is the number of measures taken to control unsewered waste water discharges and on this basis it is assumed that it is targeted at point source pressures. Three of the 8 measures are reported as not started and the other 5 are reported as completed. However, the explanatory text describes an on-going measure relating to the finalisation of a National Inspection Plan for domestic waste water treatment systems (DWWTS). The “not started” measures are for the training of inspectors to commence in January 2013; a public information campaign to raise awareness of correct operation and maintenance of DWWTS and how the national inspection plan will be implemented; and commencement of inspections in early to mid-2013. It is not clear if all these measures will be completed by 2015.

**New KTM8: Develop septic system management programme**

**Figure 15.14** Percentages of indicator/measures associated with New KTM8 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Develop septic system management programme: This measure is only reported for IEEA RBD where all 8 projects/measures are not started. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to
whether all measures will be completed by 2015. The measure is presumably to tackle point source pressures.

**New KTM9: Develop fertiliser/manure/soiled water/effluent/slurry/silage storage facilities to prevent seepage to ground or surface water**

**Figure 15.15** Percentages of indicator/measures associated with New KTM9 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Develop slurry/silage etc. storage facilities to prevent seepage to ground or surface water: This measure is only reported for IEEA RBD where 64 projects/measures are not started, and the remaining 16 are completed. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. The measure is presumably to tackle point source pressures.

**New KTM10: Diffuse Runoff (Urban) - Gullies Management**

**Figure 15.16** Percentages of indicator/measures associated with New KTM10 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Diffuse Runoff (Urban) - Gullies Management: This measure is only reported for IEEA RBD where 1 project/measure is not started, and the remaining 13 as completed. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. The measure is to tackle diffuse source pressures.
New KTM11: Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance)

Figure 15.17 Percentages of indicator/measures associated with New KTM11 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDCode; Indicator number; (value of the indicator when 100% completed)”

11.1 Number of projects/measures
Source: WISE PoM Reports

Diffuse Runoff (Urban) - Implement SUDS (Including Green Roofs Guidance): this measure is only reported for IEEA RBD where the only 4 projects/measures are not started. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. The measure is to tackle diffuse source pressures.

New KTM12: Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement

Figure 15.18 Percentages of indicator/measures associated with New KTM12 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDCode; Indicator number; (value of the indicator when 100% completed)”

Source: WISE PoM Reports

Diffuse Runoff (Urban) - Storm sewers separation and qualitative improvement. This measure is only reported for IEEA RBD where zero projects/measures are reported for all stages of implementation. This is not consistent with the explanatory text where it is stated that this measure is in progress in 100% of the water bodies. The measure is to tackle diffuse source pressures.
New KTM13: Emphasise linkages between Planning, Water Services, Transport and Environmental Sections within Local Authorities for planning purposes

Figure 15.19 Percentages of indicator/measures associated with New KTM13 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Emphasise linkages between various sections within Local Authorities for planning purposes: this measure is only reported for IEEA RBD where 26 projects/measures are not started and the remaining 127 as being completed. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. It is not clear at which pressure this measure is targeted.

New KTM14: Further investigation/monitoring required

Figure 15.20 Percentages of indicator/measures associated with New KTM14 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Further investigation/monitoring required: this measure is only reported for IEEA RBD where 79 projects/measures are not started and the remaining 278 as being completed. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. It is not clear at which pressure this measure is targeted.
New KTM15: Review of Water Governance and establishment of a national water utility - Irish Water

Figure 15.21  Percentages of indicator/measures associated with New KTM15 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDCode; Indicator number; (value of the indicator when 100% completed)”

15.1 Review of water governance in Ireland
Source: WISE PoM Reports

Governance: this measure is applied in all 7 RBDs and concerns the review of Water Governance and the establishment of a national water utility (Irish Water). No indicator values are reported for this KTM. It is reported that “Discussions are concluding between the Department, the EPA and the Local Authorities (LA) on new governance arrangements for implementing the WFD. Agreement is close subject to defining & securing the necessary resources on a 3-tier structure. The key tasks of making the RBMPs including establishing objectives & POM, would become the responsibility of the EPA (‘tier 2’). The EPA would be assisted by regional networks (‘tier 3’) of local & public authorities, led by a ‘lead’ LA. The relationship between them would be underpinned by a service level agreement. ‘Tier 1’ consists of a group of representatives from key Government Departments (lead by the Dept. of Environment) & state agencies with responsibilities in relation to the Directive. They would be responsible for policy, regulation & resources. It would also review the draft management plans prepared by the EPA & recommend them, or not, for approval by the Minister.” It is not stated here when the new legislation and changes will be made but other parts of the report indicate that this measure has been delayed by a year to a year and a half. It is not clear whether the new administrative arrangements will be in place by 2015.

New KTM16: Implement Community Digestors for Alternative Energy

Figure 15.22  Percentages of indicator/measures associated with New KTM16 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDCode; Indicator number; (value of the indicator when 100% completed)”

16.1 Number of projects/measures.
Source: WISE PoM Reports
Implement Community Digestors for Alternative Energy: This measure is only reported for IEEA RBD where 148 projects/measures are not started and the remaining 17 as being completed. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. It is not clear at which pressure this measure is targeted.

**New KTM17: Implement Fats, Oils and Grease Programme**

**Figure 15.23** Percentages of indicator/measures associated with New KTM17 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Implement Fats, Oils and Grease Programme: This measure is only reported for IEEA RBD where 0 projects/measures are not started and 16 are reported as being completed. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. It is assumed that this measure is targeted at point source pressures.

**New KTM18: Improve farmyard structure/operations to divert rainwater runoff**

**Figure 15.24** Percentages of indicator/measures associated with New KTM18 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Improve farmyard structure/operations to divert rainwater runoff: This measure is only reported for IEEA RBD where 59 projects/measures are not started and the remaining 16 as being completed. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. It is assumed that this measure is targeted at diffuse source pressures.
New KTM19: Investigate and eliminate misconnections

Figure 15.25  Percentages of indicator/measures associated with New KTM19 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Investigate and eliminate misconnections: This measure is only reported for IEEA RBD where 10 projects/measures are not started and the remaining 7 as being completed. It is not clear from the explanatory text as to what the measures refer to and the information is not consistent with the indicator values reported. There is no information as to whether all measures will be completed by 2015. It is assumed that this measure is targeted at point source pressures.

New KTM20: Pollution reduction programmes for designated shellfish waters

Figure 15.26  Percentages of indicator/measures associated with New KTM20 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Pollution reduction programmes for designated shellfish waters. This measure is applied in all 7 RBDs. The indicator is in terms of the number of pollution reduction plans in place. All 64 plans in IE as a whole are reported to be completed but it is stated that they all undergo review. This measure is assumed to tackle all relevant pressures that might affect shellfish waters.
New KTM21: Restrict Cattle Access to rivers - Create Cattle Drinking points

Figure 15.27 Percentages of indicator/measures associated with New KTM21 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Restrict Cattle Access to rivers - Create Cattle Drinking points: This measure is only reported for IEEA RBD where 4 projects/measures are not started and the remaining 46 as being completed. Implementation of the measure includes investigative studies, stakeholder meeting and preparatory works. The measure also includes a provision for the fencing of drinking water access/rivers and the installation of drinking water troughs. There is no information as to whether all measures will be completed by 2015. It is assumed that this measure is targeted at diffuse source pressures.

New KTM22: Measures taken to control Invasive Alien Species

Figure 15.28 Percentages of indicator/measures associated with New KTM22 that were reported as being not started, planning on-going, construction on-going and completed in 2012

Key to indicators measures
The annotations next to each bar in the Figure shows “RBDCR Code; Indicator number; (value of the indicator when 100% completed)”

21.1 Number of projects/measures.
Source: WISE PoM Reports

22.1 Number of measures for control of Invasive Alien Species
Source: WISE PoM Reports
16. **Overall progress with the Programme of Measures**

**Main achievements**

Good progress has been made in the implementation of measures and making them operational. The same information was reported for each of the RBDs reflecting the national approach to the definition and implementation of measures. The main achievements are in terms of improvements to water governance, strengthening of regulations, introduction of, or proposals for new legislation to improve implementation of WFD requirements, and progress in review and amendment of licences and inspections of facilities, and improvement of effluent quality at WWTPs. The introduction of water charges for domestic users is expected by 2014. Recent efforts have been made to better understand the links between pressures and impacts and the outcomes should be used alongside enhanced monitoring to better design and target measures in the second RBMPs. Good basic measures are in place to control pressures from agriculture but these need to be supplemented in the face of increasing pressures arising from stated agricultural production ambitions (Harvest 2020) and coordinated with the preparation of Rural Development Plans.

**Main obstacles**

It is implied that there has been (and perhaps still will be) some obstacles with regards to water governance which is being addressed or will be addressed in the coming period by the adoption of new legislation and regulations and proposals for other legislation. The lack of financial resources in the public sector resulting from the Programme for Government and Programme of Financial Support for Ireland with the EU, IMF and ECB and the consequent significant reduction in local authority resources for enforcement of GAP Regulations has impacted on the delivery though this is said to continue at a good level. The revision of the water sector in Ireland and the establishment of Irish Water with whom responsibility for the implementation of some measures is also a cause of delays.

The lack of impact data from monitoring that constrained the formulation of some measures should be less important in the second cycle plans. In that regard with respect to chemical pressures, recent failures of EQSs indicate that sources of chemicals leading to these impacts need to apportioned among sectors to facilitate appropriate measures to ensure future EQS compliance.

**Overall Progress**

Good progress has been achieved in implementing the programmes of measures but a better assessment of the gap to the achievement of objectives is needed.

Evidence of progress is given in terms of the improvement of effluent quality at WWTPs with secondary treatment from 54% meeting standards in 2009 to 58% in 2010. Further progress with this basic measure is required. There has also been a strengthening of existing, or introduction of new legislation/regulations including the Environmental Impact Assessment legislation which has improved control over afforestation and forest road construction projects; screening and consent processes introduced for certain types of agricultural projects, including land drainage works on lands used for agriculture and a reduction in the threshold for mandatory screening EIA for drainage of wetlands from 20 Ha down to 2 & 0.1 Ha.

Major revision of Ireland’s transposing legislation for the Habitats Directive was undertaken including better integration with the planning & development legislation.
Existing discharge to water licences are being reviewed; IPPC, waste and waste water discharge licences are being reviewed and amended (if necessary); and a registration & inspection system for domestic wastewater treatment systems is being introduced.

A major reform of the water sector is underway in Ireland with the forthcoming establishment of Irish Water as a national utility company with wide-ranging functions to be determined by primary legislation. Further implementation of basic measures related to drinking water is required. It is also proposed to consolidate domestic legislation on water quality to improve the quality of service, increase the cost efficiency and conserve water resources. New legislation to provide for the requirements of Article 11(3) (e) (control of abstractions & impoundments) & (i) (hydromorphological changes) of the WFD will be introduced as part of a consolidated Water Quality Framework Bill, to be developed as part of the overall reform of the water sector in Ireland. This needs to be in place to underpin measures in the 2nd RBMP.

A holistic programme of measures comprising basic and supplementary measures is required to bridge the gap to the achievement of objectives that can be delivered in the second and third RBMP cycles. Ireland should coordinate measures required for the WFD and FD to ensure wider benefits are secured. The role of green infrastructure and natural water retention measures is relevant in this regard.
17. Progress in financing measures

The cost of complying with environmental regulations is generally borne by those parties which are subject to regulation. The cost of administering environmental regulation is largely funded through central government. The on-going national reform of the water sector and the extension of water charges to all sectors provides an opportunity to set a clear policy in relation to the funding of water services in line with the Water Framework Directive. Except for the funding of recharge/augmentation of groundwater in 3 RBDs (LIFE+), all other basic measures are funded from national sources. The vast majority of supplementary measures are funded from non-EU (national) sources: six of the 136 supplementary measures at the national level are funded from LIFE+. It is not explicit that funding has been secured for all measures. Greater certainty on the financing of measures in future plans utilising all funding channels (i.e. water charges, EU and national funds). A pertinent statement perhaps is that relating to the formation of Irish Water ‘The Programme for Government & the Programme of Financial Support for Ireland with the EU/IMF/ECB form an important background to the decisions (with regards to revision of Irish water regulation and formation of Irish water). Irish Water will be responsible for both investing in & operating water services infrastructure.